

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 79-169

NPDES NO. CA0037810

WASTE DISCHARGE REQUIREMENTS FOR:

CITY OF PETALUMA - WATER POLLUTION
CONTROL PLANT
SONOMA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region,
(hereinafter Board) finds that:

1. The City of Petaluma (hereinafter called the discharger) has applied for waste discharge requirements and a permit to discharge wastes from its water pollution control plant under the National Pollutant Discharge Elimination System (NPDES) by application dated **December 17, 1979**.
2. The discharger presently discharges waste from its water pollution control plant into the Petaluma River, a water of the United States, at a location with 38° 12' 30" latitude and 122° 35' longitude.
3. The discharger describes the existing discharge as follows:
 - a. The average annual waste flow from the discharger's sewer system is 2.9 million gallons per day (mgd) and 0.3 mgd of the flow is industrial waste.
 - b. The waste is given secondary treatment before being discharged to the Petaluma River.
 - c. The discharger has eliminated some wet weather overflows from its sewer collection system. Whether all untreated sewage overflow from the system has been eliminated is unknown.
 - d. The discharger adopted and has implemented an ordinance regulating industrial waste discharges to the sewer system. The status of compliance with the ordinance has been achieved and has not yet been documented.
4. A Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) was adopted by the Board in April 1975. The Basin Plan contains water quality objectives for the Petaluma River.
5. The beneficial uses of the Petaluma River are:
 - a. Navigation
 - b. Water contact recreation
 - c. Non-contact water recreation
 - d. Warm freshwater habitat
 - e. Cold freshwater habitat

- f. Wildlife habitat
 - g. Preservation of rare and endangered species
 - h. Fish migration
 - i. Fish spawning
 - j. Preservation of Areas of Special Biological Significance (Potential)
6. The Basin Plan prohibits the discharge of wastewater which has characteristics of concern to beneficial uses:
 - a. At any point at which the wastewater does not receive a minimum initial dilution of at least 10:1, and
 - b. Into any nontidal water or dead-end slough or similar confined water areas or their immediate tributaries. Exceptions can be considered where a discharge is approved as part of a reclamation project.
 7. The waste discharge is covered by Order Nos. 79-107, 76-74, and 74-195 adopted on August 21, 1979, July 20, 1976, and December 17, 1974, respectively.
 8. The discharger proposes the following:
 - a. The discharger's treatment plant will be upgraded to provide secondary treatment for an average design flow of 5.2 mgd.
 - b. The discharger will study the elimination of the discharge to the Petaluma River during dry weather months.
 - c. The discharger is investigating the utilization of the effluent for agricultural reclamation during dry weather.
 9. The Board hereby grants an exception to Basin Plan prohibitions for discharges to the Petaluma River during wet weather months if wastewater is used for a feasible agricultural reclamation project in dry weather.
 10. Novato Sanitary District, as lead agency for the Eastern Marin and Southern Sonoma Wastewater Agencies which include the **discharger**, requested an NPDES Permit time extension for construction of required facilities. This request was pursuant to Section 301(i)(1) of the Federal Water Pollution Control Act (FWPCA), as amended. The Board finds the request warranted and grants the time extension for compliance with Section 301(b) pursuant to Section 301(i) of the Act.
 11. Novato Sanitary District as lead agency for Eastern Marin and Southern Sonoma Wastewater Agencies certified a final Environmental Impact Report (EIR) on September 17, 1979, for their wastewater management projects in accordance with the California Environmental Quality Act (Public Resources Code, Section 2100 et seq.). The members of this Regional Board have received and reviewed a summary of these documents.

12. The EIR specifies that this project could have the following adverse impacts on the environment:
 - a. Construction may possibly disrupt areas having archaeological significance;
 - b. Mosquito and midge control are potential problems;
 - c. Degradation of soil is possible; and
 - d. Disruption of Petaluma Adobe State Historic Park is a potential problem.
13. If cultural material is revealed, construction in the area will be stopped until the integrity of the find is insured to mitigate adverse impacts of Finding 12.a.
14. The discharger will design and manage the treatment and irrigation facilities to mitigate adverse impacts of Finding 12.b, 12.c, and 12.d.
15. The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
16. The Board, in a public meeting, **heard** and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to the provisions of Division 7 of the California Water Code and regulations adopted thereunder and to the provision of the Federal Water Pollution Control Act, as amended, and regulations and guidelines adopted thereunder, that the discharger shall comply with the following:

A. Prohibitions

1. The discharge of wastewater at any point at which the wastewater does not receive an initial dilution of at least 10:1 is prohibited (receiving water to wastewater flow).
2. The discharger is prohibited from bypassing or overflowing untreated wastewater to waters of the United States, either at the plant or from the collection systems.
3. The average dry weather flow to the treatment plant shall not exceed 5.2 mgd. Average shall be determined over three consecutive dry weather months each year.
4. The discharge of wastewater to the Petaluma River is prohibited from May 1 through November 30 of each year. The Executive Officer may authorize discharge prior to November 30 based on a demonstration that early rainfall has produced adequate flushing flow in the Petaluma River.

B. Effluent Limitations

The discharge of wastewater to the Petaluma River shall meet the following limitations:

1. The discharge of an effluent containing constituents in excess of the following limits is prohibited:

<u>Constituents</u>	<u>Units</u>	<u>30-day Average</u>	<u>7-day Average</u>	<u>Daily Maximum</u>
a. BOD	mg/l	30	45	60
	lbs/day	2400		4800
	kg/day	1090		2180
b. Suspended Solids	mg/l	30	45	60
	lbs/day	2400		4800
	kg/day	1090	0	2180
c. Oil & Grease	mg/l	10	-	20
	lbs/day	800		1600
	kg/day	364		728
d. Settleable Solids	ml/l/hr	0.1	-	0.2
e. Chlorine residual	mg/l	-	-	0.0

- f. In any representative set of samples the waste as discharged shall meet the following limit of quality:

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The survival of a test organism acceptable to this Regional Board in 96-hour bioassays of the effluent as discharged shall achieve a median of 90% survival for three consecutive samples and a 90 percentile value of not less than 70% survival for 10 consecutive samples.

- g. The discharge shall not have pH of less than 6.0 nor greater than 9.0.

2. Prior to the compliance deadline for Effluent Limitation B.l.b, as specified in Provision E.l, discharge of an effluent containing constituents in excess of the following limits is prohibited:

<u>Constituent</u>	<u>Units</u>	<u>30-day Average</u>
Suspended Solids	mg/l	75
	lbs/day	6000
	kg/day	2750

3. The waste as discharged, or at some place in the treatment process, shall meet the following limit of bacteriological quality:

The total coliform bacteria for a median of five consecutive effluent samples shall not exceed a most probable number (MPN) of 23 per 100 milliliters.

4. Representative samples of the effluent shall not exceed the following limits more than the percentage of time indicated: (1)

<u>Constituent</u>	<u>Unit of Measurement</u>	<u>50% of time</u>	<u>10% of time</u>
Arsenic	mg/l (kg/day)	0.01 (0.364)	0.02 (0.728)
Cadmium	mg/l (kg/day)	0.02 (0.728)	0.03 (1.092)
Total Chromium	mg/l (kg/day)	0.005 (0.182)	0.01 (0.364)
Copper	mg/l (kg/day)	0.2 (7.28)	0.3 (10.92)
Lead	mg/l (kg/day)	0.1 (3.64)	0.2 (7.28)
Mercury	mg/l (kg/day)	0.001 (0.036)	0.002 (0.073)
Nickel	mg/l (kg/day)	0.1 (3.64)	0.2 (7.28)
Silver	mg/l (kg/day)	0.02 (0.728)	0.04 (1.46)
Zinc	mg/l (kg/day)	0.3 (10.92)	0.5 (18.20)
Cyanide	mg/l (kg/day)	0.1 (3.64)	0.2 (7.28)
Phenolic Compounds	mg/l (kg/day)	0.5 (18.20)	1.0 (36.40)
Total Identifiable			
Chlorinated			
Hydrocarbons	mg/l (kg/day) (2)	0.002 (0.073)	0.004 (0.146)

(1) These limits are intended to be achieved through secondary treatment source control and application of pretreatment standards.

(2) Total Identifiable Chlorinated Hydrocarbons shall be measured by summing the individual concentrations of DDT, DDD, DDE, aldrin, BHC, chlordane, endrin, heptachlor, lindane, dieldrin, polychlorinated biphenyls, and other identifiable chlorinated hydrocarbons.

5. The arithmetic mean of the biochemical oxygen demand and suspended solids values, by weight, for effluent samples of wastewater discharged to Petaluma River that are collected in a period of 30 consecutive calendar days, shall not exceed 15 percent of the arithmetic mean of the respective values, by weight, for influent samples collected at approximately the same times during the same period (85% removal).

C. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:
 - a. Floating, suspended, or deposited macroscopic particulate matter or foam;
 - b. Bottom deposits or aquatic growths;
 - c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
 - d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;

- e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.
2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:
 - a. Dissolved oxygen 5.0 mg/l minimum. Annual median - 80% saturation. When natural factors cause lesser concentration(s) than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.
 - b. Dissolved sulfide 0.1 mg/l maximum.
 - c. pH Variation from natural ambient pH by more than 0.2 pH units.
 - d. Un-ionized Ammonia 0.025 mg/l annual median
as N 0.4 mg/l maximum
 - e. Nutrients 50 µg/l chlorophyll a, maximum
 3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Federal Water Pollution Control Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

D. Pond Limitations

1. Wastewater within one foot of the surface of the ponds shall meet the following limits at all times:
 - a. Dissolved Oxygen 2.0 mg/l minimum
 - b. Dissolved Sulfide 0.1 mg/l maximum
2. A minimum freeboard of at least 2 feet shall be maintained in the ponds.
3. The ponds shall be protected against erosion, washout and flooding from a flood having a predicted frequency of once in 100 years.

E. Provisions

1. The discharger shall comply with the following time schedule to achieve compliance with Prohibition A.4., and Effluent Limitation B.1.b.

<u>Task</u>	<u>Completion Date</u>
a. Submit complete Step 2 grant application to SWRCB	January 22, 1980

- b. Authorize Step 2 engineering March 2, 1980
 - c. Begin design March 3, 1980
 - d. Submit construction management schedule to this Board and SWRCB March 18, 1980
 - e. Submit results of feasibility study for agricultural reclamation to this Board for review in a public hearing June 1, 1980
 - f. If agricultural reclamation is found to be not feasible by the Regional Board, the discharger shall submit a new Report of Waste Discharge and time schedule for achieving compliance with Basin Plan water quality objectives July 1, 1980
 - g. Provide construction financing July 1, 1980
 - h. Submit completed plans and specifications of all facilities necessary to achieve compliance, Step 3 grant application, and final revenue program to the SWRCB for approval September 1, 1980
 - i. Begin construction December 1, 1980
 - j. Complete construction April 1, 1982
 - k. Full compliance May 1, 1982
2. The discharger shall comply with the following time schedule to achieve compliance with Prohibition A.2.

<u>Task</u>	<u>Completion Date</u>
a. Make inspection during wet weather and report whether untreated sewage bypassing or overflow from any of the sewer systems occurs	May 1, 1981
b. Submit description of actions necessary to stop whatever sewage bypassing and overflow is found and schedule of their completion dates	July 1, 1981
c. Full compliance	November 1, 1982

3. Within 120 days of the date of adoption of this Order, the discharger shall submit a proposed compliance schedule for the development of a pretreatment program to this Board and EPA. When the schedule is approved by the Regional Board and EPA, the permit shall be modified to include the approved compliance schedule.
4. Order Nos. 79-107, 76-74, and 74-195 are hereby rescinded.
5. The discharger shall review and update its contingency plan annually as required by Board Resolution No. 74-10. The discharge of pollutants in violation of this Order where the discharger has failed to develop and/or implement a contingency plan will be basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.
6. The discharger shall comply with a Self-Monitoring Program as ordered by the Executive Officer.
7. The discharger shall comply with all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated April 1977.
8. In reviewing compliance with the limits of Effluent Limitation B.5 of this Order, the Board will take special note of the difficulties encountered in achieving compliance during periods of high wet weather flow.
9. This Order expires December 1, 1984. The discharger must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9, of the California Administrative Code not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.
10. This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal Water Pollution Control Act or amendments thereto, and shall become effective 10 days after date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Fred H. Dierker, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on **December 18, 1979.**

FRED H. DIERKER
Executive Officer

Attachments:
Standard Provisions, Reporting
Requirements & Definitions (April 1977)